T-18-1 – "Breeding Waterbird Survey Use of Rice Fields in Southwestern Louisiana"

Abstract: Rice fields are agricultural wetlands concentrated in several areas in the U.S., including southwestern Louisiana. Rice fields are flooded for much of the year and support thick emergent vegetation, potentially providing high-quality habitat for several species of breeding waterbirds. The objectives of this study were to: (1) determine relative nest density, nest success, and habitat associations of breeding waterbirds in southwestern Louisiana rice fields and, (2) determine the effectiveness of callback surveys as a monitoring tool. In the summers of 2004 and 2005, marsh bird surveys and nest searches were conducted in Cameron, Jefferson Davis, Vermilion, and Acadia Parishes in southwestern Louisiana.

In 2004, 42 fields were searched and 30 of those were surveyed. In 2005, 40 fields were searched and 60 were surveyed. Purple gallinules nested in the highest densities in both years, followed by fulvous whistling-ducks, king rails, common moorhens, and least bitterns. A total of 283 purple gallinule nests, 176 fulvous whistling-duck nests, 77 king rail nests, 59 common moorhen nests, and 12 least bittern nests were found. The highest nest densities for purple gallinules and king rails were in fields with a high proportion of irrigation canals around the perimeters and a low proportion of trees. High relative nest density for purple gallinules was also associated with a high proportion of rice fields within 1 km of each field. Fulvous whistling-ducks responded the least to the local and landscape characteristics, but were associated with a high proportion of soybean fields near rice fields. Birds began nesting at the beginning of June and most nests were terminated by the time of harvest. Nest survival, or the percentage of nests to hatch at least one egg, was between 52% and 79% for purple gallinules, ~50% for king rails, and ~40% for fulvous whistling-ducks. Most survey responses were detected in June, and survey detections were concentrated in similar areas as the highest nest densities. Callback surveys were an effective technique for monitoring secretive marsh birds in this region. (**Abstract from**: Pierluissi, S.; 2006; "Breeding Waterbird Use of Rice Fields in Southwestern Louisiana"; M.S. Thesis; Louisiana State University, Baton Rouge, LA; 92 pp.)

The grant was closed on 30 September 2006.

For more information about State Wildlife Grant T-18, or to obtain copies of interim or final reports, please contact the State Wildlife Grant Coordinator, LDWF Fur & Refuge Division.